

Information Technology (IT) Initiative

Business Case Responses for BYs 2003 & 2004

Please type your responses in the white answer blocks provided and return the electronic copy of this document to Treva Lutes by April 26th. Please do not modify the shaded rows of the table. These rows contain special codes that we will use to populate a database automatically.

1.0 General Background

1.1 Initiative Name

Enterprise Application Integration (EAI) Releases 4.0 and 5.0

1.2 Initiative Description

The Enterprise Application Integration (EAI) architecture is intended not only as a tool for integrating the existing legacy systems at FSA, but as a means of supporting customer access and future development efforts which require access to common data and business processes.

The EAI architecture is designed to provide a set of common technology services that enable the integration of the processes and data of disparate systems. FSA can use the common services to integrate existing legacy systems, and to quickly develop e-Commerce applications that can easily reuse business logic and data that is in FSA legacy systems.

The EAI Architecture will enable FSA to convert and format data and message content from several different systems and data sources. EAI will provide the messaging infrastructure for connectivity between existing legacy systems, COTS applications, Data-Warehousing systems, and Web-based solutions. The EAI messaging infrastructure and the advanced integration capabilities, such as message/data transformation, will provide an overall service delivery system with standard interfaces upon which all new and legacy systems can depend.

ITA and EAI are two distinct and non-overlapping technical architecture areas within the Modernization Program. The ITA provides a conduit to web enable applications through its reusable web services, product specialist support, reusable environments and web construction products. The EAI team provides an infrastructure for application teams to quickly and efficiently integrate with back end systems through a queuing mechanism which guarantees delivery.

1.3 Initiative Type

Business Process Support System
Financial Management System _____
Non-Financial Management System _____

Program Delivery System
Financial Management System _____
Non-Financial Management System _____

IT Infrastructure _____
IT Services X
General Office Automation _____

1.4 Contact Information

	Name	Principal Office	Phone Number
Project Manager	Ganesh Reddy	FSA	202-377-3557
Program Manager	Ganesh Reddy	FSA	202-377-3557
Project Sponsor	Steve Hawald	FSA	202-377-3501
Contracting Officer	Janet Scott	FSA	202-377-3377
Contracting Officer's Representative	Carol Seifert	FSA	202-377-3506

2.0 Business Process

2.1 Business Process Support

☐ Grants
☐ Evaluation
☐ Research
☐ Information
☐ Dissemination
☐ Enforcement
☐ Resource
☐ Management &
Administration
☐ Loans
☒ Other: ☐ FSA

The EAI architecture is a strategic component of the overall FSA enterprise architecture, also known as the Integrated Technical Architecture (ITA). The EAI architecture addresses the FSA business channels' need to access common data and business processes across the disparate systems. The technical services provided by the EAI architecture support students, schools, and financial partners by enabling the FSA systems to exchange information via common, reusable methods.

2.2 Business Problem or Opportunity and Causing Conditions

This document describes the business case for the implementation of future releases of the Enterprise Application Integration (EAI) architecture. The EAI architecture is a strategic component of the overall FSA enterprise architecture, also known as the Integrated Technical Architecture (ITA). The EAI architecture addresses the FSA channels' need to access common data and business processes across the disparate systems. The technical services provided by the EAI architecture support students, schools, and financial partners by enabling the FSA systems to exchange information via common, reusable methods.

Prior to the EAI initiative, FSA faced a number of integration challenges including:

- Costly legacy systems which duplicated data due to a lack of integration across the applications and technical platforms;
- Multiple hardware/software platforms, each with its own security/authentication regime;
- Many high-maintenance point-to-point interfaces between systems;
- Interdependent applications (changes to one application can affect all interfaces to/from that application);

The EAI Modernization effort is on schedule to provide middleware support for the Modernization applications through 2002. Previous work has built and validated the technology components of the core EAI architecture, including the following:

- Implemented the EAI Bus, consisting of MQSeries Messaging and MQSeries Integrator, for both the development and production environments.
- Implemented the MQSeries Messaging Infrastructure to connect 9 Legacy Systems to the EAI Bus, for both development and production. Those systems included:
 - Direct Loan Servicing System (DLSS)
 - Central Processing System (CPS)
 - National Student Loan Data System (NSLDS)
 - Student Aid Internet Gateway (SAIG/bTrade)
 - Post-secondary Educational Participant System (PEPS)
 - Financial Management System (FMS)
 - electronic Campus Based Systems (eCBS)
 - electronic Master Promissory Note (eMPN) component of the Loan Origination (LO) Web Server
 - Promissory Note (P-Note) Imaging System
- Implemented the MQSeries Messaging infrastructure in the Internet domain, to connect the WebSphere Application Servers to the EAI Bus.
- Designed, built, and validated an assured delivery transport mechanism for application communication.

- Recommended FSA messaging standards and guidelines for the disparate and heterogeneous FSA application platforms.
- Provided the programming interfaces required to support FSA application integration.
- Demonstrated and validated the data conversion, message routing, and formatting capabilities between the EAI bus and the queues on the legacy systems.

The EAI Core architecture will invest in building additional and enhanced technical services that enable key FSA business applications to perform end-to-end business processes. Business applications will be able to integrate/communicate with back-end systems via the common, reusable services provided by previous releases of EAI Core Architecture. The EAI architecture will contribute to FSA's PBO objectives, while complying with the investment management principles mandated by Clinger-Cohen legislation.

2.3 Existing Systems

Currently, FSA is faced with a number of integration challenges, mainly multiple hardware/software platforms, individually developed systems, each with its own security/authentication regime, with high-maintenance, point-to-point interfaces mostly relying on FTP.

2.4 Solution Impact

(If this is an implemented initiative with no enhancements, then address item (3) only)

1. The implementation of EAI will reduce the burden on existing legacy systems as new technology is implemented in FSA. Much of the current interface burden will migrate from the legacy systems to the interface software. The software includes pre-built adapters that can be re-used as interface requirements change. To configure these adapters, the EAI team will need to gather technical specifications, data formats and business rules from the legacy systems.

The implementation of EAI enables modernization to occur in incremental fashion, i.e., not all systems need to be replaced/retired at once.

The Enterprise Application Integration (EAI) architecture is fundamental to the FSA modernization strategy. It enables modernization to progress and realize benefits incrementally without requiring completion of an enormous enterprise-wide re-engineering project. Individual components can be modernized one at a time and still function properly within the overall business context. This significantly reduces the risk associated with such a large undertaking by enabling effective incorporation of smaller components. It also allows the benefits of modernization to be realized sooner, albeit in an incremental fashion. Some have referred to this evolutionary approach to modernization as "build a little, test a little."

2. As part of the EAI implementation, there will be some impact on legacy systems attached to the EAI architecture. The installation of MQ Series on the legacy servers will not impact the legacy systems, but the development of the connectors/adapters between those systems and the MQ Series product will be local to each legacy environment.

The deployment of EAI and the implementation of these connectors will be coordinated through the VDC and the individual contractor responsible for the operation of the legacy systems. Connectivity to the EAI Infrastructure will have no impact on the functionality or service levels of the backend legacy systems.

EAI also provides a capability that can be used to facilitate coordination of data across systems to improve consistency and reduce redundancy while the systems are being modernized. For example, transactions could be automatically generated to notify other systems when a student's address is updated. This provides the option of implementing an incremental improvement in data consistency while a larger data integration effort is underway.

3. The stakeholders in this initiative include: 1) the existing FSA legacy systems, 2) the Virtual Data Center that

supports the operations of many FSA systems, and 3) the FSA modernization initiatives. Their involvement is described below.

4. Each system that will be hooked onto the middleware bus is involved in the planning, design and testing phases via integrated requirements and design sessions as well as integration testing.
5. N/A

2.5 Business Process Reengineering

(Applies only to New Business Process Support and Program Delivery Systems)

N/A

2.6 Mandatory Requirement

The EAI architecture will contribute to FSA's PBO objectives, while complying with the investment management principles mandated by Clinger-Cohen legislation. This initiative is not required by legislation, regulation, or other guidance.

2.7 Consequence of Not Funding the Initiative

FSA's current stove-piped systems will need to build system specific interfaces with newly modernized systems and vice versa. The cost of each individual interface will be substantially higher than the cost of utilizing the middleware technology.

FSA continues with existing legacy systems and maintenance challenges. Attempts to leverage new technology with old legacy systems will only clog and aggravate existing interface problems and infrastructure deficiencies.

Restricts FSA's ability to meet business requirements of customers and mandates of electronic signature legislation.

3.0 Strategic Alignment

3.1 OMB E-Government Initiative Alignment

☐ Consolidated Health Information
☐ Disaster Assistance and Crisis Response
☐ E-Authentication
☐ E-Grants
☐ E-Payroll/HR
☐ E-Training
☐ E-Travel
☐ E-Vital
☐ Electronic Records Management
☐ Eligibility Assistance Online
☐ Expanding Electronic Tax Products for Businesses
☐ EZ Tax Filing
☐ Federal Asset Sales
☐ Federal Enterprise Architecture
☐ Geospatial Information One Stop
☐ Integrated Acquisition Environment
☐ Integrated Human Resources/e-Clearance
☐ International Trade Process Streamlining
☐ One Stop Business Compliance Information

- ☐ Online Access for Loans
- ☐ Online Rulemaking Management
- ☐ Recreation One Stop
- ☐ Recruitment One Stop
- ☐ USA Services
- ☐ Wireless Public Safety Interoperable Communications – Project SAFECOM
- ☒ None of the Above

3.2 Mission Alignment

- Goal 1: Create a Culture of Achievement

- ☐ Objective 1.1 Link federal education funding to accountability for results.
- ☐ Objective 1.2 Increase flexibility and local control.
- ☐ Objective 1.3 Increase information and options for parents.
- ☐ Objective 1.4 Encourage the use of scientifically based methods within federal education programs.

- Goal 2: Improve Student Achievement

- ☐ Objective 2.1 Ensure that all students read at grade level by the third grade.
- ☐ Objective 2.2 Improve math and science for all students.
- ☐ Objective 2.3 Improve the performance of all high school students.
- ☐ Objective 2.4 Improve teacher and principal quality.

- Goal 3: Develop Safe Schools and Strong Character

- ☐ Objective 3.1 Ensure that our nation's schools are safe and drug-free and that students are free of alcohol, tobacco, and other drugs.
- ☐ Objective 3.2 Promote strong character and citizenship among our nation's youth.

- Goal 4: Transform Education into an Evidence-Based Field

- ☐ Objective 4.1 Raise the quality of research funded or conducted by the Department.
- ☐ Objective 4.2 Increase the relevance of our research in order to meet the needs of our customers.

- Goal 5: Enhance the Quality of and Access to Postsecondary & Adult Education

- ☐ Objective 5.1 Reduce the gaps in college access and completion among student populations differing by race/ethnicity, socioeconomic status, and disability while increasing the educational attainment of all.
- ☐ Objective 5.2 Strengthen accountability of postsecondary institutions.
- ☐ Objective 5.3 Establish effective funding mechanisms for postsecondary education.
- ☐ Objective 5.4 Strengthen Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal College and Universities.
- ☐ Objective 5.5 Enhance the literacy skills of American adults.

- Goal 6: Establish Management Excellence

- ☐ Objective 6.1 Develop and maintain financial integrity and management and internal controls.
- ☐ Objective 6.2 Improve the strategic management of the Department's human capital.
- ☒ Objective 6.3 Manage information technology resources, using e-gov, to improve service for our customers and partners.
- ☒ Objective 6.4 Modernize the Student Financial Assistance programs and reduce their high-risk status.
- ☐ Objective 6.5 Achieve budget and performance integration to link funding decisions to results.
- ☐ Objective 6.6 Leverage the contributions of community-and faith-based organizations to increase the effectiveness of Department programs.
- ☐ Objective 6.7 By becoming a high performance, customer-focused organization, earn the President's Quality Award.

☐ None of the Above

3.3 Strategic Plan Strategies Supported

Strategic Objective 6.3

Manage information technology resources, using e-gov, to improve service for our customers and partners.

- **Reduce partners' data reporting burden:** Minimize burden on our partners by reducing the number of information collection addressing similar issues. With our stakeholders and customers, collaboratively build and publish data standards, including consensus data elements and definitions. The enterprise architecture will be structured to meet business needs.
- **Complete enterprise architecture:** Create a business focused enterprise architecture that describes long term information system requirements and prioritizes IT business needs based on Strategic Plan Goals and Objectives.

Strategic Objective 6.4

Modernize the Student Financial Assistance programs and reduce their high-risk status.

Create an efficient delivery system: Use new technologies and system integration for improving systems, minimizing noncompliance and default rates, and reducing the improper payment of student aid funds.

3.4 Quality Indicators

EAI supports the overall integration of FSA systems. The primary quality indicator is the ability of modernized components of the overall FSA system to integrate with the other modernized and legacy FSA systems, and their ability to develop cost effective interfaces.

4.0 Technology Initiative

4.1 Initiation Date

October 1, 2002

4.2 Initiative Deployment / Implementation Date

September 30, 2004

4.3 Initiative Phase

☒ Under Development
☐ Maintenance Only
☒ Maintenance with Enhancements

There are major capabilities that are under development while previously developed capabilities are enhanced and maintained.

4.4 Initiative Scope

The scope of this project includes new capabilities, services and independent verification and validation:

New Capabilities

Enterprise Application Integration (EAI) Software

Will deploy EAI software as required to support FSA business applications. Any costs associated with the procurement of significant additional software are not included.

Enterprise Application Integration (EAI) Workshops

FSA employees and business channels will be invited to periodic training sessions to communicate what EAI is, how it is being used, and its status at FSA. This will also include knowledge transfer, communications plan, and educational sessions.

Enterprise Application Integration (EAI) Core Adapters

Core adapters are custom software that allow two or more disparate systems to communicate. Core adapters will allow legacy systems and modernization applications to interface with the FSA architecture. The core adapters allow inter-system communication of disparate FSA legacy systems in an efficient and reusable manner. The development of new adapters will be driven by the overall modernization program priorities.

Benefits of core adapters include:

- Reduced development, testing, and software maintenance costs associated with adapters built once and reused for multiple development efforts.
- Improved quality and consistency of software.
- Reduced time to deploy new applications.
- Improved quality and integrity of system data.
- Cost savings will be generated as multiple systems reuse the available business functions.

Enterprise Application Integration (EAI) Common Services Management/Component Library

This work will integrate, manage, and maintain a library of EAI based business functions to maximize business channel benefit and reusability. It also provides services to ensure application teams maximize the benefits provided by the EAI business functions.

- Reusable EAI components will include such items as Common School, Common Student, Lender-Guarantor and Reusable Function (i.e. Update Student Address) containers. Other components will be developed as application requirements are defined. The design of the components will be built to support reuse across business channels.
- There will be a centralized component library.

Services

Enterprise Application Integration (EAI) Core Services

Core Services include infrastructure, upgrades, and reusable practices.

Infrastructure

Provide implementation of the additional core EAI architecture and services including MQSeries Messaging and MQSeries Integrator, for both the performance testing and staging environments. Performance monitoring and analysis capabilities of the EAI architecture will also be added. Evaluate the need for MQ Workflow and deploy if justified.

Enterprise Application Integration (EAI) Upgrades

Upgrade EAI software packages, software patches, and operating systems to more current versions for the development and test/stage environments. As vendors drop support of older versions of the software, the EAI team must ensure the manufacturer supports the product suite. Upgrading to the most current versions will ensure quality and availability of continued technical support. New software versions will eliminate defects and improve the robustness of the software. Software enhancements will be made available that can be used to provide new

capabilities.

Enterprise Application Integration (EAI) Reusable Practices

Documentation outlining the guidelines to perform monitoring and troubleshooting of the EAI environments will be developed. A set of industry accepted best practices and technical standards that will address how to design, build, and efficiently test software. Implementation of best practices and standards will ensure consistent software development across the project. Developers do not have to individually research best practices and standards. The research is done once and rolled out to each developer. This will also help to speed up development time and the learning curve. Reusable practices will include naming standards and programming standards.

Enterprise Application Integration (EAI) Development Integration Services

Continued support and expansion of the EAI Architecture to enhance the standardized, reusable infrastructure for integrating the business capabilities and data of the disparate FSA systems. EAI technical resources will provide:

- Business Capability Architecture support
- Technical Integration support
- Strategic Planning for single set of stored data solution
- EAI Business Integration Strategy and Plan for legacy system integration
- Business Focused Sequence Planning (i.e. release planning) for EAI Solution rollout

Application Maintenance

The EAI team will provide architecture maintenance for tools and products that make up the EAI environment. This effort will include trouble shooting EAI products, making EAI product fixes, and EAI product upgrades. The EAI team will make changes in development, execute tests in the test environment, and handover the necessary changes to the operations infrastructure team for production installation. The benefits for this initiative are:

- Enhanced system security associated with upgrades reduces security vulnerabilities. The net effect is an increase in data integrity and a reduction in overall fraud risk.
- Overall customer experience (as well as overall application uptime) is increased as upgrades fix known software defects.
- Ensures latest product enhancements and functional improvements are available to customers increasing end-user satisfaction.
- Enhanced service results in fewer application defects. The net effect is a reduction in call center support costs.

Besides upgrades to software, application maintenance includes troubleshooting issues that occur with EAI interfaces that are in production. These issues can include but are not limited to:

- MQSeries connectivity and availability issues
- MQSI processes issues
- Data Integrator issues
- EAI Bus Server performance issues
- Custom EAI Adapter issues
- Custom EAI data transformation issues
- Miscellaneous issues which include configuration of environments for code and interface changes.

The EAI team will provide production support for emergency fixes to the mission critical applications such as COD on a twenty-four by seven basis.

4.5 Assumptions, Constraints, and Dependencies

- (1) Assumptions: None
- (2) Constraints: None
- (3) Dependencies: Many key modernization initiatives are closely dependent on the implementation of EAI.

4.6 Outstanding Issues

None

4.7 Benefits

Reduce Unit Costs

- 1) Reduce development
- 2) Reduce servicing cost
- 3) Reduce development and maintenance training cost
- 4) Reduce administrative cost
- 5) Reduce costs associated with development and maintenance of interfaces to external systems
- 6) Cost savings from reuse
- 7) Application of industry best practices ensures consistent software development across projects

Increased Customer Satisfaction

- 1) Increase self service options
- 2) Increase user convenience
- 3) Increase speed in delivery of information
- 4) Increase access to accurate and timely data

Increased Employee Satisfaction

- 1) Business Managers will be able to make changes to systems with more ease and efficiency
- 2) More time for FSA employees to provide service to students
- 3) Access to the right data at the right time

The Enterprise Application Integration (EAI) architecture is fundamental to the FSA modernization strategy. It enables modernization to progress and realize benefits incrementally without requiring completion of an enormous enterprise-wide re-engineering project. Individual components can be modernized one at a time and still function properly within the overall business context. This significantly reduces the risk associated with such a large undertaking by enabling effective incorporation of smaller components. It also allows the benefits of modernization to be realized sooner in an incremental fashion.

4.8 Crosscutting Initiative

- ☐ Entire Department
- ☐ Office for Civil Rights
- ☐ Office of Educational Research and Improvement
- ☐ Office of Elementary and Secondary Education
- ☐ Office of English Language Acquisition
- ☐ Office of Postsecondary Education
- ☐ Office of Special Educational and Rehabilitation Services
- ☒ Federal Student Aid
- ☐ Office of Vocational and Adult Education
- ☐ Office of the Chief Financial Officer
- ☐ Office of the Chief Information Officer
- ☐ Office of the General Counsel
- ☐ Office of Inspector General
- ☐ Office of Intergovernmental and Interagency Affairs
- ☐ Office of Legislation and Congressional Affairs
- ☐ Office of Management
- ☐ Office of Public Affairs
- ☐ Entities outside of the Department

4.9 Audit Finding

None

4.10 Alternatives Analysis

(This Applies Only To Initiatives Under Development or Being Implemented.)

Alternatives	Description	Total Life Cycle Costs	Benefits	Drawbacks
Alternative 1 (Selected Alternative)	EAI Releases	FY2002 - \$3.8M FY2003 - \$3.45M FY2004 - \$3M FY2005-07 - \$3M Total – \$13.25M	See Section 4.7	None
Alternative 2	Remain as-is	Maintenance cost of all current systems	None	<ul style="list-style-type: none"> FSA continues with existing legacy interface systems and maintenance challenges Attempts to leverage new technology with old existing legacy systems will only clog and aggravate existing interface problems and infrastructure

				deficiencies <ul style="list-style-type: none"> Restricts ability of FSA to meet business requirements of customers and mandates of electronic signature legislation
Alternative 3	Enhance an existing system	TBD	None	Continue with legacy interface systems and maintenance challenges
Alternative 4	Implement on a smaller scale	TBD	Cheaper	FSA could enable a few applications to utilize the services provided by the EAI architecture, but this would not demonstrate the value of the enterprise architecture nor would it demonstrate the reusability of the architecture.

5.0 Enterprise Architecture	
5.1 Use of COTS/GOTS	
	Percentage of COTS/GOTS Components: <input type="checkbox"/> 0 - 25% <input type="checkbox"/> 26 - 50% <input type="checkbox"/> 51 - 75% <input checked="" type="checkbox"/> 76 - 100% <input type="checkbox"/> Not Applicable
5.2 Consistency with Product Support Plan (Please refer to Appendix A to identify supported products and indicate non-supported products below)	

Sun Solaris 7
 Sun Java Development Kit 1.3 (required for AMI)
 IBM MQSeries Messaging 2.2.1.1
 IBM MQSeries Messaging 5.2
 IBM MQSeries Messaging 5.1
 IBM MQSeries AMI 1.2.1
 IBM MQSeries Integrator 2.01
 CommerceQuest Data Integrator 4.0.1
 IBM DB2 6.1 (bundled with MQSI)

5.3 Section 508 Compliance (Accessibility)

- (1) N/A – Backend system
- (2) N/A
- (3) N/A

5.4 Government Paperwork Elimination Act (GPEA) (Business Process Support and Program Delivery Systems only)

- (1) N/A
- (2) N/A
- (3) N/A

5.5 Information Management (Business Process Support and Program Delivery Systems only)

- (1) N/A
- (2) N/A
- (3) N/A

5.6 Privacy

- (1) N/A – Backend System
- (2) N/A

5.7 Security (This question applies if the initiative meets the definition of major application or general support system as defined in OMB Circular A-130.)

Part 1 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 1 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

01/10/2003

Part 1 – c.

This initiative has just been reclassified as a “system;” security will be handled starting with the FY03 initiative

Part 2 – a.	(Please enter a date in the form of MM/DD/YYYY or N/C)
N/C	
Part 2 – b.	(Please enter a date in the form of MM/DD/YYYY or N/A)
03/30/2003	
Part 2 – c.	
This initiative has just been reclassified as a “system;” security will be handled starting with the FY03 initiative	
Part 3 – a.	(Please enter a date in the form of MM/DD/YYYY or N/C)
N/C	
Part 3 – b.	(Please enter a date in the form of MM/DD/YYYY or N/A)
03/30/2003	
Part 3 – c.	
This initiative has just been reclassified as a “system;” security will be handled starting with the FY03 initiative	
Part 4 – a.	(Please enter a date in the form of MM/DD/YYYY or N/C)
N/C	
Part 4 – b.	(Please enter a date in the form of MM/DD/YYYY or N/A)
03/30/2003	
Part 4 – c.	
Part 5 – a.	(Please enter a date in the form of MM/DD/YYYY or N/C)
N/C	
Part 5 – b.	(Please enter a date in the form of MM/DD/YYYY or N/A)
03/30/2003	
Part 5 – c.	
Part 6 – a.	(Please enter a date in the form of MM/DD/YYYY or N/C)
N/C	
Part 6 – b.	(Please enter a date in the form of MM/DD/YYYY or N/A)
03/30/2003	
Part 6 – c.	

6.0 Risk and Project Management

6.1 Risk Management

Risk Category	Risk Description	Risk Probability	Risk Impact	Management Strategy
Strategic	N/A	N/A	N/A	N/A
Organizational/Change Management	N/A	N/A	N/A	N/A
Project Resources (Financial, Personnel, etc.)	Project takes longer than expected, thus driving up labor costs	Minimal	Medium	<ul style="list-style-type: none"> • Make sure contractors have a clear scope and a well defined project plan • Use a performance based financial relationship and/or fixed price bids • Make sure business owners have buy-in of the Enterprise Integration Architecture
Exposure	<ul style="list-style-type: none"> • Hardware and software delivery delays 	Minimal	Minimal	<ul style="list-style-type: none"> • Coordination of time frames and schedules
Management	<ul style="list-style-type: none"> • Lack of buy-in from business stakeholders (channels) 	Minimal	Minimal	<ul style="list-style-type: none"> • Implementation of the enterprise infrastructure must be understood as a strategic investment, supporting all business units.
Data/Information	N/A	N/A	N/A	N/A
Application	N/A	N/A	N/A	N/A
Technology/Infrastructure	<ul style="list-style-type: none"> • Company goes out of business • Technology may not be appropriate for all systems/applications 	Unknown	Minimal	<ul style="list-style-type: none"> • Contractors will be using proven technology developed and provided by industry leaders • System will be evaluated by FSA

Security	Access Violation	Minimal	Minimal	<ul style="list-style-type: none"> •Utilize FSA security procedures to manage access to applications •Utilize FSA security procedures to manage developer access to EAI system •Utilize VDC network security to manage system access to network ports
Privacy	N/A	N/A	N/A	N/A

6.2 Operational Performance Measures

1. EAI's performance indicators are:
 - Number of FSA systems it helps interface together, i.e. the number of systems "on the bus"
 - Number of business functions that it supports, i.e. the number of business functions supported directly by EAI capability
2. Specific to individual system release schedule. EAI is an enabler of system-to-system transaction processing.

6.3 General Acquisition Strategy

- (1) Single Contract
- (2) Firm Fixed Price
- (3) No financial incentive or other performance based contract will be used.
- (4) Period of Performance Same as GSA Contract (9/7/99 – 9/30/02, with two 5 year options)
- (5) General contract information are as follows:

Ordering Agency: US Department of Education (ED), Federal Student Aid 830 1st Street NE, Washington, DC 20004

Project: Modernization Partner

Contract Type: Blanket Purchase Agreement (BPA) under GSA Schedule 70 Contract (GS-35F-4692G) implemented using Task Orders (FP, FP Share in Savings IF, and T&M)

BPA #: ED-99-DO-0002

(6) – (10) N/A

APPENDIX A

Hardware

Personal Computers

Primary Support

___ Compaq Professional Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

___ Professional Dell Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

Secondary Support

___ As defined in OCIO non-standard workstation policy

Laptops

Primary Support

___ Dell Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

___ Toshiba Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

Secondary Support

___ As defined in OCIO non-standard workstation policy

Printers

Primary Support

___ HP LaserJet 5 and newer

Secondary Support

___ HP LaserJet 4

Monitors

Primary Support

___ 17-inch or larger, capable of 1024x768 resolution

Personal Digital Assistants (PDA)

Primary Support

___ Blackberry RIM 957

___ Blackberry RIM 950

Secondary Support

___ IntelliSync

___ Microsoft ActiveSync 3.1 or newer

Software

Client Operating Systems

Primary Support

___ Windows 2000 Professional Service Pack (SP)2

Secondary Support

___ As defined in OCIO non-standard workstation policy

Office Suites

Primary Support

___ Office 2000 Service Release (SR) 1A with Word 2000, Excel 2000, PowerPoint 2000, Access 2000

Anti-Virus Software

Primary Support

___ Norton AntiVirus 2000 Corporate Edition 7.5

Communications

Primary Support

___ Citrix ICA

Secondary Support

___ Citrix Winframe

Terminal Emulation Software

Primary Support

___ Attachmate 6.5

Database Clients

Primary Support

___ Oracle 8.1.7 Client

___ Microstrategy 7

Electronic Mail Software

Primary Support

___ Outlook 2000

Internet Browsers

Primary Support

___ Internet Explorer 5.5 SP1 (128-bit encryption)

Secondary Support

___ Netscape 4.x

Helper Plug-Ins

Primary Support

___ Adobe Acrobat Reader 5.0 and newer

___ RealPlayer 8.0 Intranet

Project Management Software

Primary Support

___ Microsoft Project 2000

___ TeamMate 2000

Web/Desktop Publishing Software

Secondary Support

___ Adobe Illustrator 7.0

___ Adobe PageMaker 6.5 and newer

___ Adobe Photoshop 5.0

___ Interwoven LaunchPad

___ Macromedia Dreamweaver 2.0 and newer

___ Macromedia Fireworks 2.0 and newer

___ Macromedia FreeHand 7.0

___ Macromedia HomeSite 4.0

___ NetViz 4.0

___ Publisher 2000

Groupware

Secondary Support

___ Lotus Notes Client (all versions)

Assistive Technology Software

Primary Support

- ☐ Aladdin Genie CCTV
- ☐ Dragon Systems NaturallySpeaking 4.0 and newer
- ☐ Freedom Scientific JAWS for Windows 3.7
- ☐ Gus Word Prediction
- ☐ IBM Homepage Reader 2.5 and newer
- ☐ NexCom 300 TTY modem, which requires an ISA slot
- ☐ NexTalk/NTS, NXI Communications NTS 3.41 and newer
- ☐ ZoomText Xtra Level 2 7.04 and newer

Secondary Support

- ☐ NXI Communications NexTalk for Windows
- ☐ WinTalk modem

Principal Office-Specialized Applications

Primary Support

- ☐ ARCHIBUS/FM-10
- ☐ CARS
- ☐ CCM Plus
- ☐ CMIS
- ☐ DACS
- ☐ EDCAPS
- ☐ EDICS
- ☐ Folio Builder 4.2
- ☐ Folio Views 4.2
- ☐ HEATWEB 3.11
- ☐ IAS
- ☐ Method/1 GuideVersion 11
- ☐ Monarch Professional 5.02
- ☐ Ombusman Case Tracking System 2.0
- ☐ Peer Review System
- ☐ TRAINS

Secondary Support

- ☐ CMTS
- ☐ DLOS
- ☐ Folio Views 3.11
- ☐ GAPS
- ☐ GPAS
- ☐ IEFARS
- ☐ OCR Electronic Library
- ☐ OSERS Quick
- ☐ PC Travel Drop Box
- ☐ PEPS
- ☐ PFIE
- ☐ Response Phone System
- ☐ SACONS
- ☐ Total Access Agent

Network Operating Systems and Enterprise Software

Primary Support

- ☐ Cisco IOS 12.1(5) (Router)
- ☐ Cisco IOS 6.1(2) and newer (Switch)
- ☐ Microsoft Exchange 5.5 SP4
- ☐ Microsoft SMS 2.0 SP3
- ☒ Microsoft NT Server 4.0 SP6a
- ☐ Microsoft Windows 2000 Server SP2

- ☐ Netscape Compass Server 3.0 (SPARC)
- ☐ Netscape Enterprise Server 3.51 (SPARC)
- ☒ Oracle 8.1.7
- ☐ Raptor Firewall with PowerVPN Version 6.5
- ☒ Solaris 2.6 (SPARC)
- ☐ SQL Server 7.0 SP5
- ☐ SQL Server 2000 SP1
- ☐ Terminal Server 4.0 SP6a

Secondary Support

- ☐ All versions of Linux
- ☐ All versions of Lotus Notes
- ☐ Microsoft Internet Information Server 4.0 and newer
- ☐ SQL Server 6.5